

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NICHOLAS J. COLELLA,
HOWARD L. DAVIDSON, JOHN a. KERNS,
and DANIEL M. MAKOWIECKI

Appeal No. 1997-1594
Application 08/247,090¹

ON BRIEF

Before KIMLIN, OWENS, and LIEBERMAN, Administrative Patent Judges.

LIEBERMAN, Administrative Patent Judge.

DECISION ON APPEAL

¹Application for patent filed May 20, 1994.

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This is an appeal under 35 U.S.C. § 134 from the examiner's refusal to allow claims 1 through 14 and 26 through 30 which are all the claims in the application.

THE INVENTION

The invention is directed to a process for the preparation of a composite material containing diamond particles. Diamond particles are coated with a region of carbide forming material and a region of brazeable material. Thereafter the coated diamond particles are compacted into a porous body. The body is subsequently heated to a temperature above the melting point of the brazeable material so as to infiltrate the porous body with the brazing material.

THE CLAIMS

Claim 1 is illustrative of appellants' invention and is reproduced below.

1. A process for fabricating a composite material, comprising:

coating a quantity of diamond particles with a region of an adherent carbide forming material followed by a region of brazeable material;

compacting the thus coated diamond particles into a porous body; and

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infiltrating the porous body with a braze material by heating to a temperature above the melting point of the braze material.

THE REFERENCES OF RECORD

As evidence of obviousness, the examiner relies upon the following references:

Rohrig et al. (Rohrig)	2,382,666	Aug. 14, 1945
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Chen et al. (Chen)	5,096,465	Mar. 17, 1992
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THE REJECTIONS

Claims 1, 5, 6, 10, 12, and 14 stand rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Chen.

Claims 1 through 14 and 26 through 30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Chen in view of Rohrig.

Claim 5 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 through 14 and 26 through 30 stand rejected under 35 U.S.C. 112, first paragraph, for lack of enablement.

OPINION

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As an initial matter, appellants' Brief contains a statement that the claims should not stand or fall together. See Brief, page 7. However, no substantive argument has been submitted by appellants with respect to either the rejection under § 102 or § 103. At most, appellants refer to limitations present in some dependent claims without presenting an argument as to why each of the claims are believed to be separately patentable. Accordingly, we select claim 1, the sole independent composition claim as representative of appellants' invention and limit our consideration to said claim. 37 CFR § 1.192(c)(7) 1995.

We have carefully considered all of the arguments advanced by appellants and the examiner and agree with the appellants that the aforementioned rejections under 35 U.S.C. § 112 are not well founded. Accordingly, we will not sustain those rejections. We agree with the examiner that the rejections over Chen under § 102 and § 103 are well founded. Accordingly, we will sustain the examiner's rejection over Chen.

A. The Rejections under 35 U.S.C. § 112

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Any analysis of the claims for compliance with 35 U.S.C. § 112 should start with the second paragraph, then proceed with the first paragraph. In re Angstadt, 537 F.2d 498, 501, 190 USPQ 214, 217 (CCPA 1976), In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238, (CCPA 1971).

The legal standard for definiteness under the second paragraph of 35 U.S.C. § 112 is whether a claim reasonably apprises those of ordinary skill in the art of its scope. In re Warmerdam, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). The first inquiry is to determine whether the claims set out and circumscribe a particular area with a reasonable degree of precision and particularity.

The examiner lists two terms which he considers as being indefinite. These terms are CVD and PVD. Subsequently, however, the examiner acknowledged that CVD is defined in the specification and withdrew the rejection with respect to that term. See Answer, page 10. As to the term PVD, Appendix C clearly discloses that PVD is similarly well known. See Appendix C, page 3. Accordingly, we will not sustain the examiner's rejection of claim under the second paragraph of 35 U.S.C. § 112. We turn next to the examiner's rejection

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under the first paragraph of 35 U.S.C. § 112 on the grounds of lack of enablement. When rejecting a claim under the enablement requirement of section 112, the PTO bears the initial burden of setting forth a reasonable explanation as to why it believes the scope of protection provided by the claimed subject matter is not adequately enabled by the description of the invention provided in the specification of the application. This includes providing sufficient reasons for doubting any assertions in the specification as to the scope of enablement. If this burden is met, the burden then shifts to the applicant to provide suitable proof that the specification is enabling. See In re Wright, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993); In re Marzocchi, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971). Contrary to the requirements of the statute, the examiner has provided ample rationale that the claimed subject matter is fully enabled. See Answer, pages 4 and 8-10. The examiner's position is not that the claims are unsupported by the description of the invention in the specification, but that the claimed process does not include critical recited features.

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We find the examiner's assertions that the claims are unsupported by an adequate enabling disclosure not well taken. The specification on pages 6-12 sets forth the subject matter claimed by appellant. The examiner chooses to address only limitations that do not appear in the claimed subject matter. However, the examiner does not address the basic issue as to whether the claimed subject matter is adequately enabled.

Based upon the above considerations, we will not sustain the rejection of the examiner on the grounds of enablement.

B. The Rejection under 35 U.S.C. § 102(b)

With respect to this rejection, appellants fail to argue the separate patentability of any of the dependent claims. Accordingly, we select claim 1, the sole independent claim as representative of appellants' claimed subject matter and limit our consideration thereto. 37 CFR § 1.192(c)(7)(1995).

During patent prosecution, claims are to be given their broadest reasonable interpretation consistent with the specification, and the claim language is to be read in view of the specification as it would be interpreted by one of ordinary skill in the art. In re Morris, 127 F.3d 1048, 1053-

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1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983); In re Okuzawa, 537 F.2d 545, 548, 190 USPQ 464, 466 (CCPA 1976).

Our construction of the subject matter defined by appellants' claim 1 is that the claimed subject matter requires a process of coating a region of diamond particles by a carbide forming material followed by coating a region of diamond particles by a brazeable material. We find no requirement in the claimed subject matter that the coating be uniform or complete. We find no requirement that the materials be different, provided only that they possess both the chemical and physical functions encompassed by the claimed subject matter. Finally, we find no requirement in the claimed subject matter that the compacting and infiltrating steps may not occur simultaneously.

Based upon the above considerations, Chen discloses diamond particles coated with a metallic coating and a suitable infiltrating alloy. See column 4, lines 33-34. The metallic coating may be either a single layer or a double

layer and includes carbide forming materials such as tungsten and braze- able material such as copper. See column 4, line 66 through column 5, line 12. The infiltrating alloy includes copper alloys. See column 5, lines 13-18. Our position is supported by the specification which discloses tungsten as a carbide forming element. See page 7, and copper alloys as brazeable infiltrating materials. See specification, page 8. Accordingly, we conclude that Chen discloses the elements of coating diamond particles with an adherent carbide forming material and brazeable material as required by the claimed subject matter.

Although porosity is not specifically mentioned, we conclude that the intermediate product necessarily must be porous since the alloys disclosed by Chen, including copper-based alloys infiltrate the assembly of diamond particles.

A compacting step and heating step are performed both by vibrational packing, see column 5, lines 22-26 and by "hot pressing" taught at column 5, lines 38-41. We conclude that both compacting steps result in diamond particles in the form of a porous body.

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Based upon the above findings, we conclude that Chen teaches each of the required elements of the claimed subject matter. Appellants argue on pages 12 and 13 of the Brief that numerous additional limitations to claim 1 submitted under 37 CFR § 116 have been denied entry by the examiner. However, these arguments are not relevant in deciding the issue before us. Our consideration is necessarily limited to the claimed subject matter as it appears before us. Accordingly, we will sustain the rejection by the examiner on the grounds of anticipation.

C. *The Rejection under 35 U.S.C. § 103*

Claims 1 through 14 and 26 through 30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Chen in view of Rohrig. We shall sustain this rejection. We found *supra*, that the above claims stand together on the issue of obviousness, and we have previously affirmed the § 102 rejection of independent claims 1 and 23 as being anticipated by Chen. It is well settled that the ultimate obviousness, is lack of novelty. The claims cannot have been anticipated and not have been obvious. In re Fracalossi, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982). Accordingly, there is no

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further need to inquire into the disclosure of any of the secondary references combined with Bowers.

Nonetheless, we acknowledge that appellants have mentioned specific limitations which appear in claims 2, 3, 4, 11, 12, 14 and 26 in the Brief on pages 14 and 15. We address these limitations hereunder.

As to claim 2 which calls for codepositing two regions of materials, we previously found that Chen taught coating two layers, column 4, lines 33-34 and column 4, line 66 through column 5, line 12. The manner of depositing the layers, whether simultaneously or sequentially, whether in multiple layers or a single layer, is considered obvious to one of ordinary skill in the art.

With respect to claim 3, we find that the claim requires the presence of only a single component as one of the materials may be present in an amount of zero percent. Accordingly, no weight is accorded to the term, "blending."

As to claim 4 which requires a "uniform and complete coating," we previously found that Chen coats the diamond particles with both "carbide forming" and "brazeable" material. We further find that Chen teaches coating the

particles with chemical vapor deposition, which is the same technique also used by appellants. See column 6, lines 34-61 and claim 5. As the method of coating is the same, we conclude that Chen likewise obtains a uniform and complete coating of the diamond particles.

Although claim 11 requires compacting the diamonds in an apparatus, "consisting of a die," we find that the graphite mold taught in Example 2 of Chen is indistinguishable from the "die" of claim 11.

We further find that the compacting and simultaneous "hot pressing" step taught by Chen at column 5, lines 38-41, meets the requirements of the claimed subject matter of claim 12, that the diamond particles are compacted to produce a stable body during infiltration. Our position is supported by the absence of any requirement in the claimed subject matter that pressure not be maintained during the brazing step as a condition that the compact remain stable.

As to claim 12, we find that a composite material in the form of a sheet is suggested by Chen who teaches backing members at column 8, lines 7-12. We further find that Chen suggests formation of a sheet at Figure 4. Our view is

further supported by the fact that no specific dimensions for a sheet are required by claim 12. Indeed, a sheet is defined as "a portion of something that is thin in comparison to its length and breadth."² Moreover, Chen teaches that the cutting elements may be made to any desired shape or configuration. See column 9, lines 6-7. Based upon these considerations, we conclude that it would have been obvious for one of ordinary skill in the art to prepare cutting elements in the form of a "sheet" as required by the claimed subject matter. Accordingly, the rejection of claims 1 through 14, and 26 through 30 is affirmed under section 103.

DECISION

The rejection of claims 1, 5, 6, 10, 12, and 14 under 35 U.S.C. § 102(b) as being clearly anticipated by Chen is affirmed.

The rejection of claims 1 through 14 and 26 through 30 under 35 U.S.C. § 103 as being unpatentable over Chen in view of Rohrig is affirmed.

²Webster's Ninth New Collegiate Dictionary, page 1084, Merriam-Webster Inc. Springfield, MA., 1986.

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The rejection of claim 5 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is reversed.

The rejection of claims 1 through 14 and 26 through 30 stand rejected under 35 U.S.C. 112, first paragraph, for lack of enablement is reversed.

The decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

	Edward C. Kimlin)	
	Administrative Patent Judge)	
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)	
	Terry J. Owens)	BOARD OF
PATENT)	
	Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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	Paul Lieberman)	
	Administrative Patent Judge)	

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Henry P. Sartorio
Deputy Laboratory Counsel for Patents
Lawrence Livermore National Laboratory
P.O. Box 808 - L-703
Livermore, CA 94551